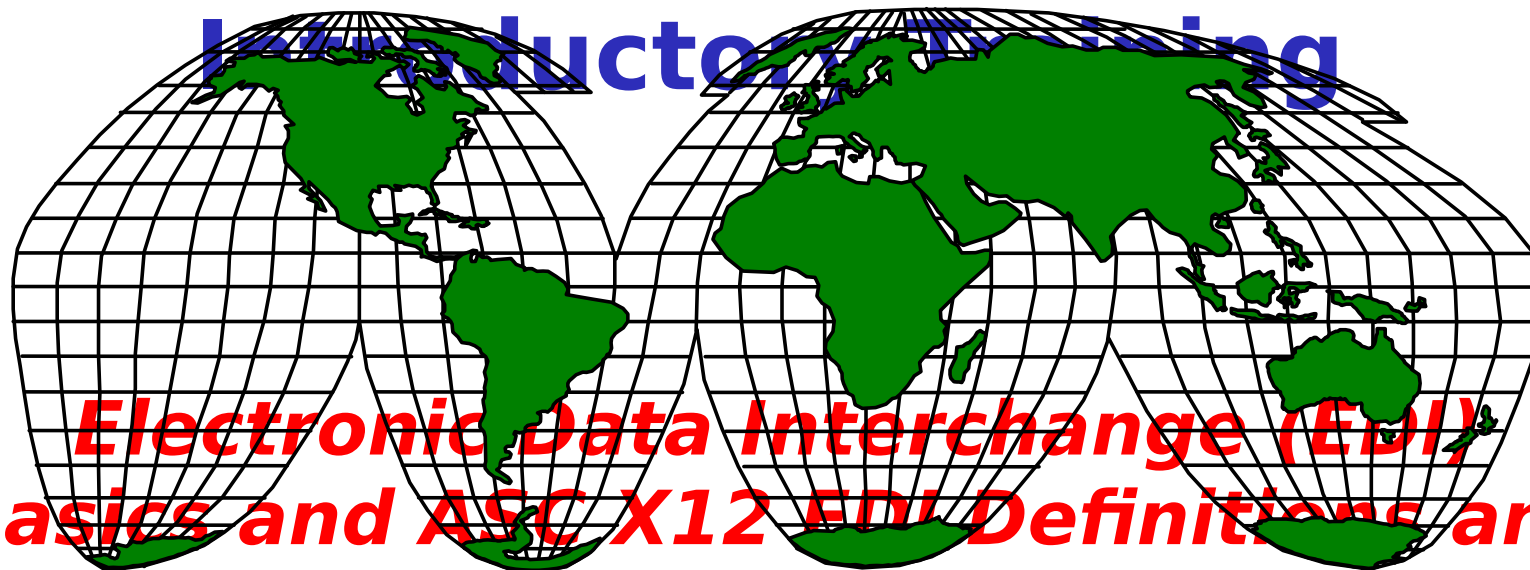




Defense Logistics Management Standards (DLMS)

Introductory Training



***Electronic Data Interchange (EDI)
Basics and ASC X12 EDI Definitions and
Concepts***



DLMS Training Catalog

Module 1 - Introduction to the DLMS

Module 2 - Electronic Data Interchange (EDI) Basics and ASC X12 EDI Definitions and Concepts

Module 3 - DLMS Functionality & Transaction Life-Cycle

Module 4 - DLMS Implementation Convention Content

Module 5 - IUID & RFID - Emerging Technologies

Module 6 - Creating/Reengineering DOD Logistics Business Processes

Module 7 - Enterprise Interoperability Tools

Module 8 - DoD Activity Address Directory (DoDAAD)

Module 9 - Supply Discrepancy Reporting (SDR)

Module 10 - DLMS Functional Financial Transaction (standalone)

Module 11 - Creating/Reengineering DoD Logistics (standalone)



Module Structure

Module 2 - ASC X12 EDI Definitions and Concepts

- **EDI Components and Structure**
 - ✓ **Data Elements**
 - ✓ **Data Segments**
 - ✓ **Segment Loops**
 - ✓ **Transaction Sets**
 - ✓ **Functional Groups**
 - ✓ **Interchange Groups**



Module 2 Objectives

Students will gain a basic understanding of:

- **The components that form the building blocks of ASC X12 EDI**
- **How the highly structured nature of X12 EDI provides the flexibility and versatility needed to communicate complex functional data content**
- **How to interpret simple raw data expressed in X12 EDI format**



EDI Components



Definition of EDI

- **Electronic Data Interchange EDI is:**
 - The computer-to-computer interchange of strictly formatted messages that represent business documents
 - A sequence of messages between two parties, either of whom may serve as originator or recipient
 - The formatted data representing the documents transmitted from originator to recipient via telecommunications



EDI Document Structure

The MILS Fixed Format Requisition

0304050607080910111213141516171819202122232425262728293031323334353637383940414243444546474849505152535455565758596061626364656657686970717273747576777

MILS Format

<u>RPs</u>	<u>Field Legend</u>	<u>Sample Data</u>
01-03	Document Identifier	A01
04-06	Routing Identifier	SMS
07	Media and Status	B
08-22	Stock Number	
5910001234567		
23-24	Unit of Issue	EA
25-29	Quantity	1
30-43	Document No	
FB230093070001		
44	Demand	R
45-50	Supplementary Address	
51	Signal	A
52-53	Fund	KZ
54-56	Distribution	
57-59	Project	9GF
60-61	Priority	08
62-64	Reqd. Delivery Date	777
65-66	Advice	2A
67-69	Blank (Date of Rcpt on Referral/Passing Order)	
70-80	Blank (Intra-Service use)	

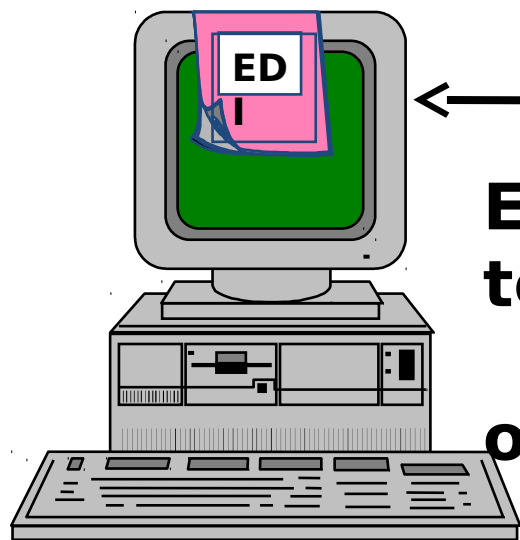
DLMS EDI Format

```
ST*511*00000001^
BR*00*A0*20000729*****131
708^
N1*OB**10*FB2300**FR^
LX*1^
N9*TN*FB230093070001^
PO1**1*EA***FS*5910001234
567^
DD*R*74^
LM*DF^
LQ*0*A01^
LQ*78*9GF^
LQ*79*08^
LQ*80*2A^
LQ*DE*A^
LQ*DF*B^
LQ*AL*777^
N1*Z4**M4*SMS**TO^
FA1*DY*D340^
FA2*B5*KZ^
SE*14*00000001^
```



ASC X12 EDI Versions/Releases

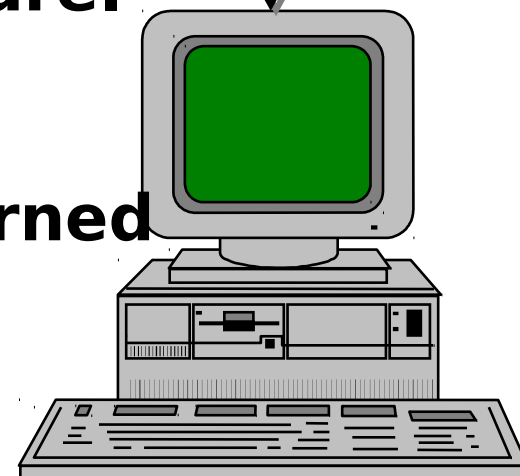
- **Versions are released approximately every five (5) years**
- **New releases of ASC X12 Draft Standards for Trial Use (DSTU), referred to as the 'Standards', are published annually**
- **DLMS based on ASC X12 release 4010 and 4030**



**Defense Automated
Addressing System
(DAAS)**

**EDI is the computer-
to-
computer exchange
of
routine business info**

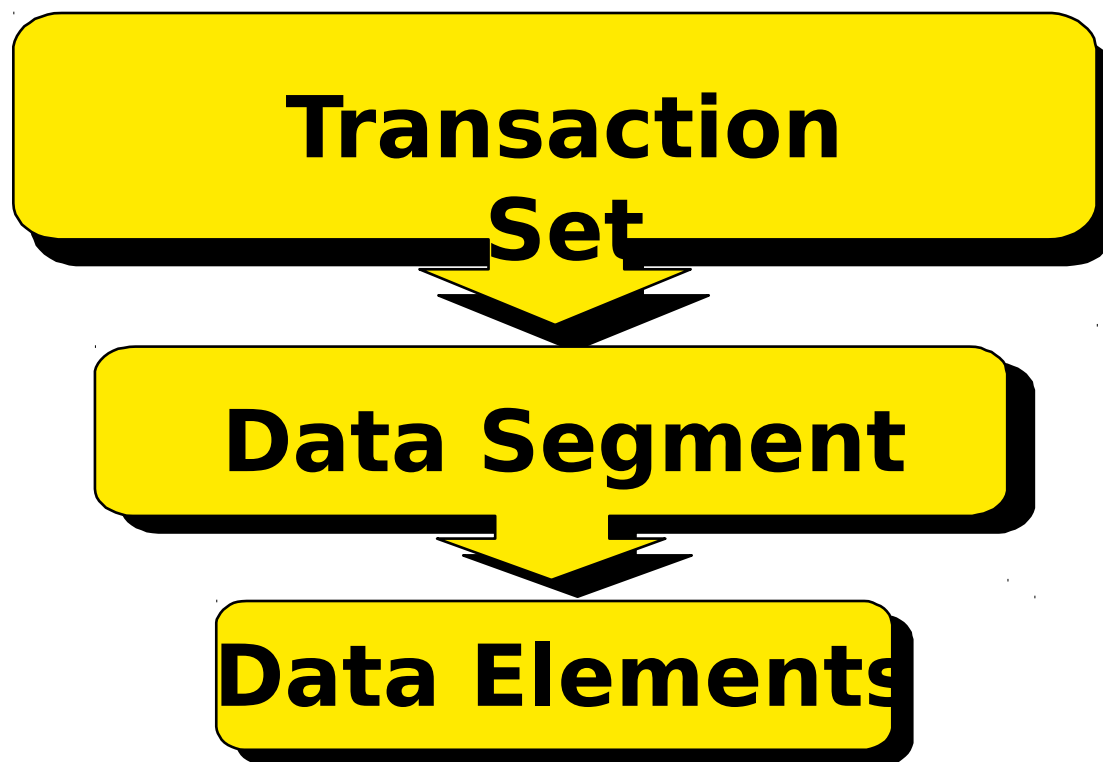
**ASC X12 EDI provides a means for exchanging
information between established computer
systems via a standard file structure.**



**The information, in the form of a
transaction set, is generally patterned
after a conventional document,
such as a requisition or invoice.**

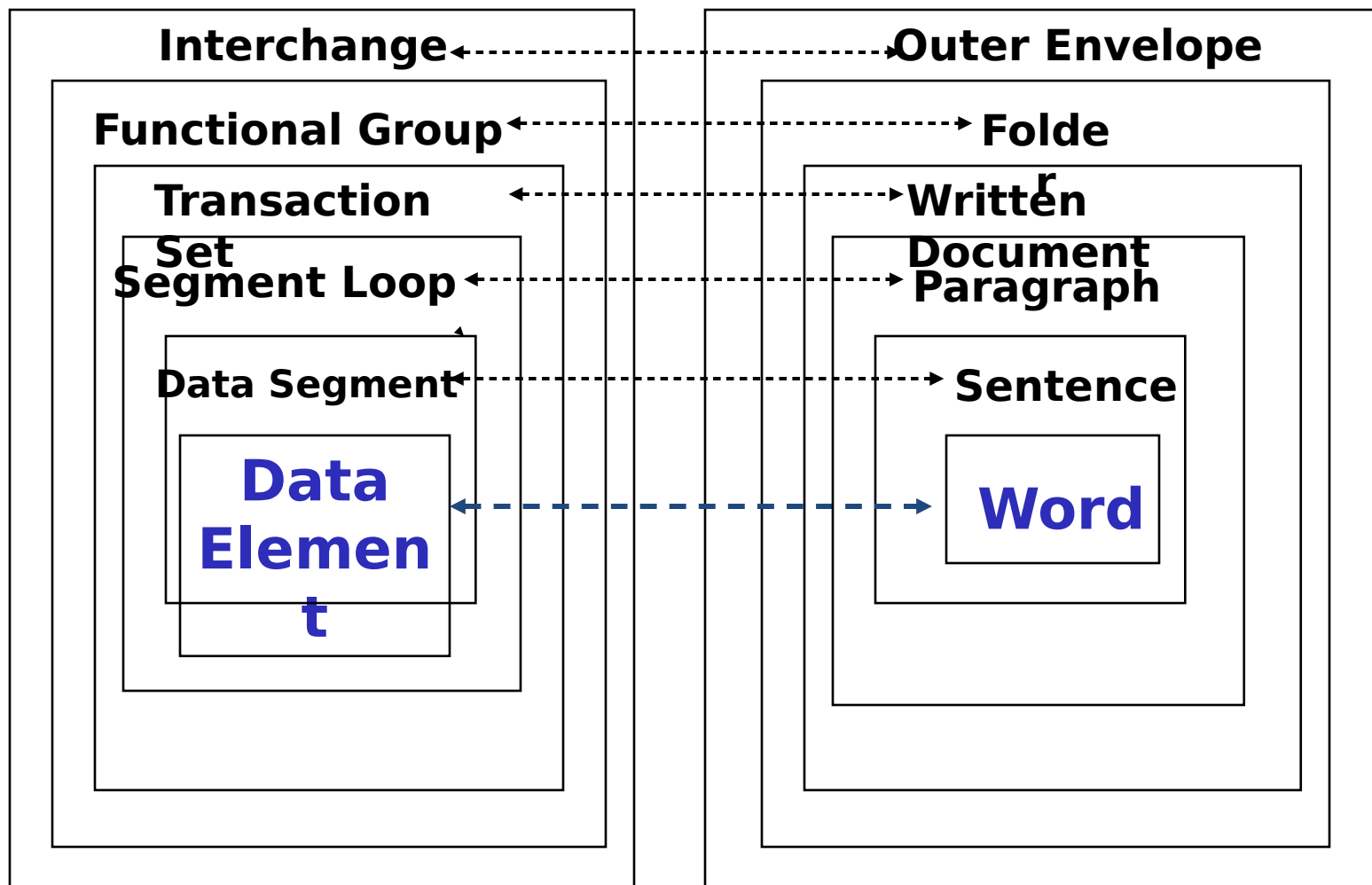


Transaction Set Detail Hierarchy of Relationship





Standard File Structure





Data Elements

- **The data element is the smallest named unit of information in the standard**
- **Each data element is identified by a number**
- **Data elements can represent a code, a value, or text (such as a description)**
- **Each data element has both a minimum and maximum length**
- **Data elements can be mandatory,**



Data Element Types

There are seven types of data elements:

- AN - Alphanumeric string including special characters**
- B - Binary (example: 010101101)**
- DT - Date in YYMMDD or CCYYMMDD format based on EDI version being used (DLMS Baseline is 004010)**
- ID - Identifier (works with a code list specified by the dictionary)**
- Nn - Numeric (implies the number of decimal points, e.g., N2 would be two decimal positions)**
- R - Decimal Numeric (decimal points must be transmitted if used)**
- TM - Time in HHMMSSDD format**

1.562
7

A6B7C
15627





Data Element Size

How Does It Work?

Indicating Min: 6

Max: ~~6~~/6

must be

12345



6 positions

Or
Where

Min: 4 Max: 6

4/6

must be

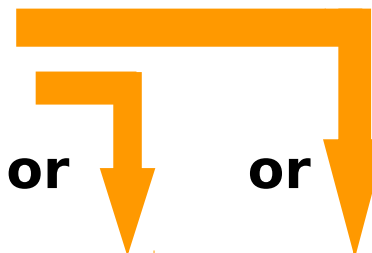
or

or

1234

12345123456

Length
of Field





Data Element Use

Data Elements may be:

- M = Mandatory
- O = Optional
- X = Syntax note applies
- Z = Semantic note applies
- Combinations may be applicable



Simple and Component Data Elements

Data elements are identified as either:

- Simple
- Component
 - ✓ Used to form composite data structures -- a group of two or more component (simple) data elements linked together to form a single data element
 - ✓ The component data elements may be optional, mandatory, or relational



Data Element Dictionary Example

98 Entity Identifier Code

TYPE = ID, MIN = 2, MAX = 3

Code identifying an organizational entity, a physical location, or an individual

SEGMENTS USED IN:

N1,20 segment codes listed

TRANSACTION SETS USED IN:

511,838,850,....145 transaction sets listed

CODE DEFINITIONS & EXPLANATION:

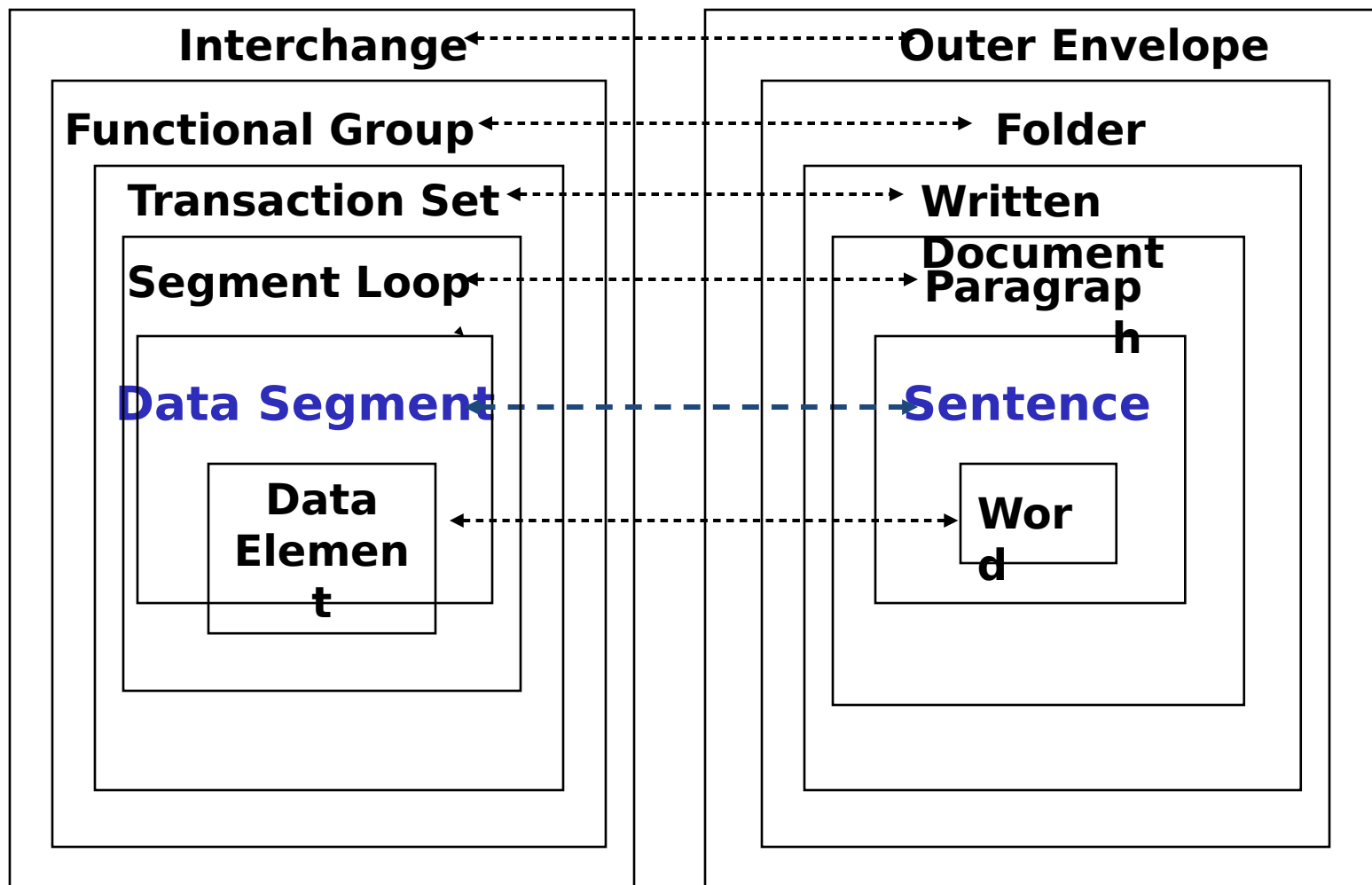
Over 700 codes listed

- **There are more than 1800 Data Elements in the ASC X12 Data Element Dictionary - about 196 of which are used by DLMS**

<u>CODE</u>	<u>DEFINITIONS AND EXPLANATION</u>
BS	Bill and Ship To
BT	Bill To
OB	Ordered By
ST	Ship To
Z3	Potential Source of Supply
Z4	Owning Inventory Control Point
Z5	Management Control Activity
Z7	Mark-for Party



Standard File Structure





Data Segment

The data segment is an intermediate unit of information in a transaction set

Each data segment is composed of:

- A unique segment ID
- One or more logically related data elements

The data segment is used to convey a grouping of functionally-related user information



Data Segment Characteristics

The data is organized in a defined sequence within the segment

Each data element in the segment is identified by a reference designator composed of the unique segment identifier and the element's sequence number

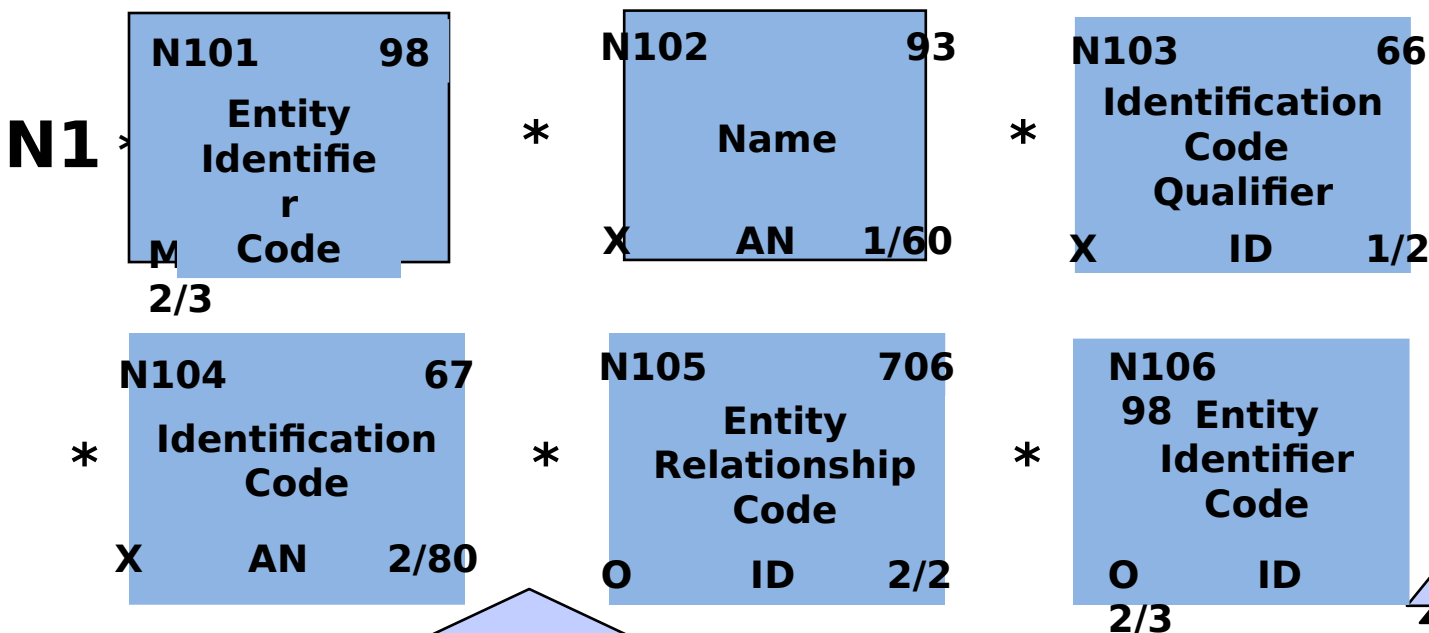
Each data element is separated by a data element delimiter character

A segment terminator character identifies the end of the segment



Data Segment Diagram

N1 Name



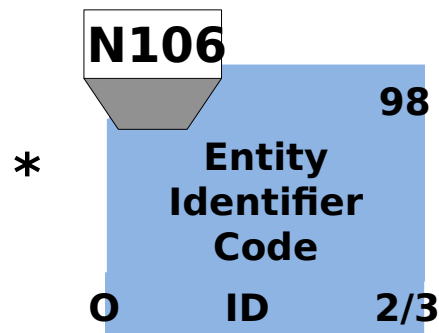
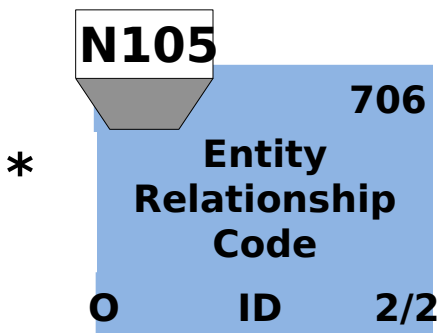
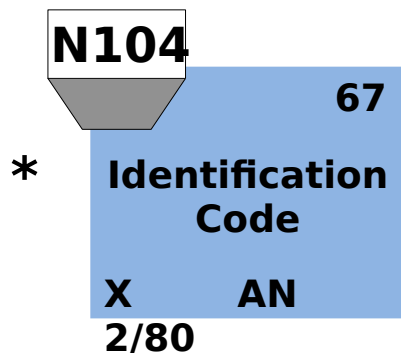
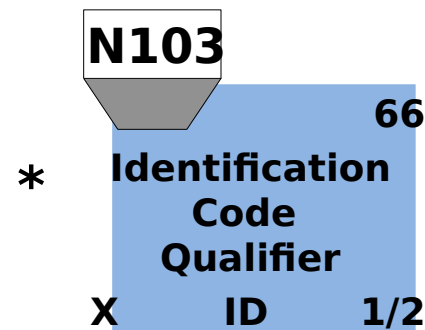
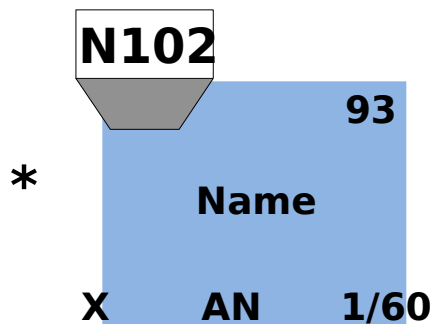
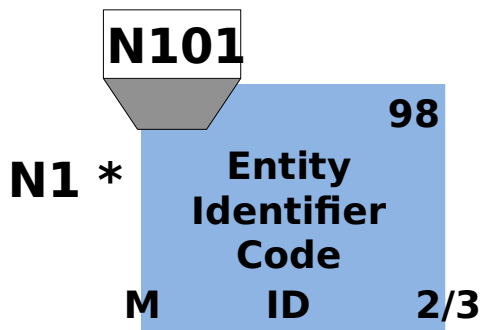
Separator = Element
Delimiter

Data
Segment
Terminator



Data Segment Diagram

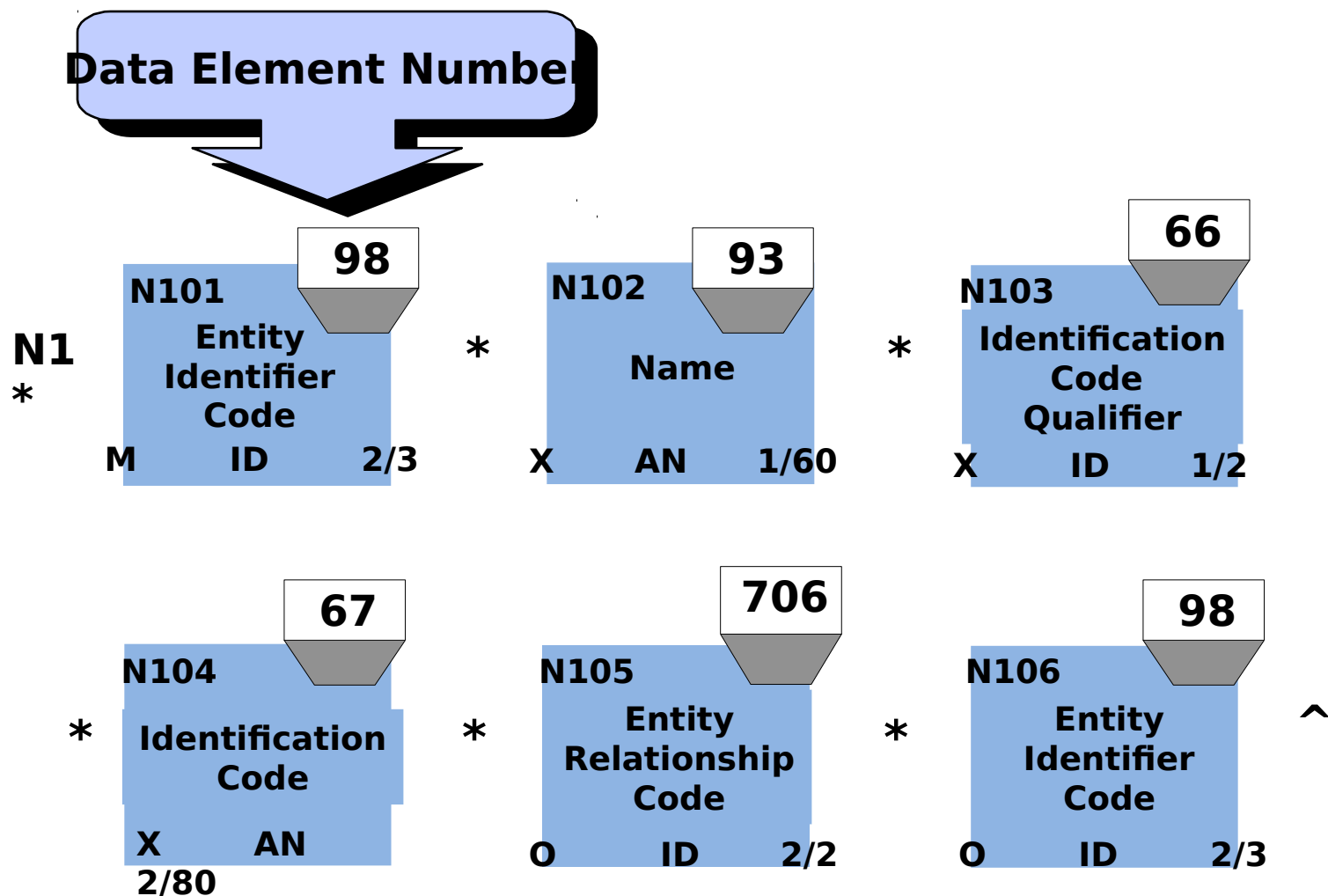
Reference
Designator



^

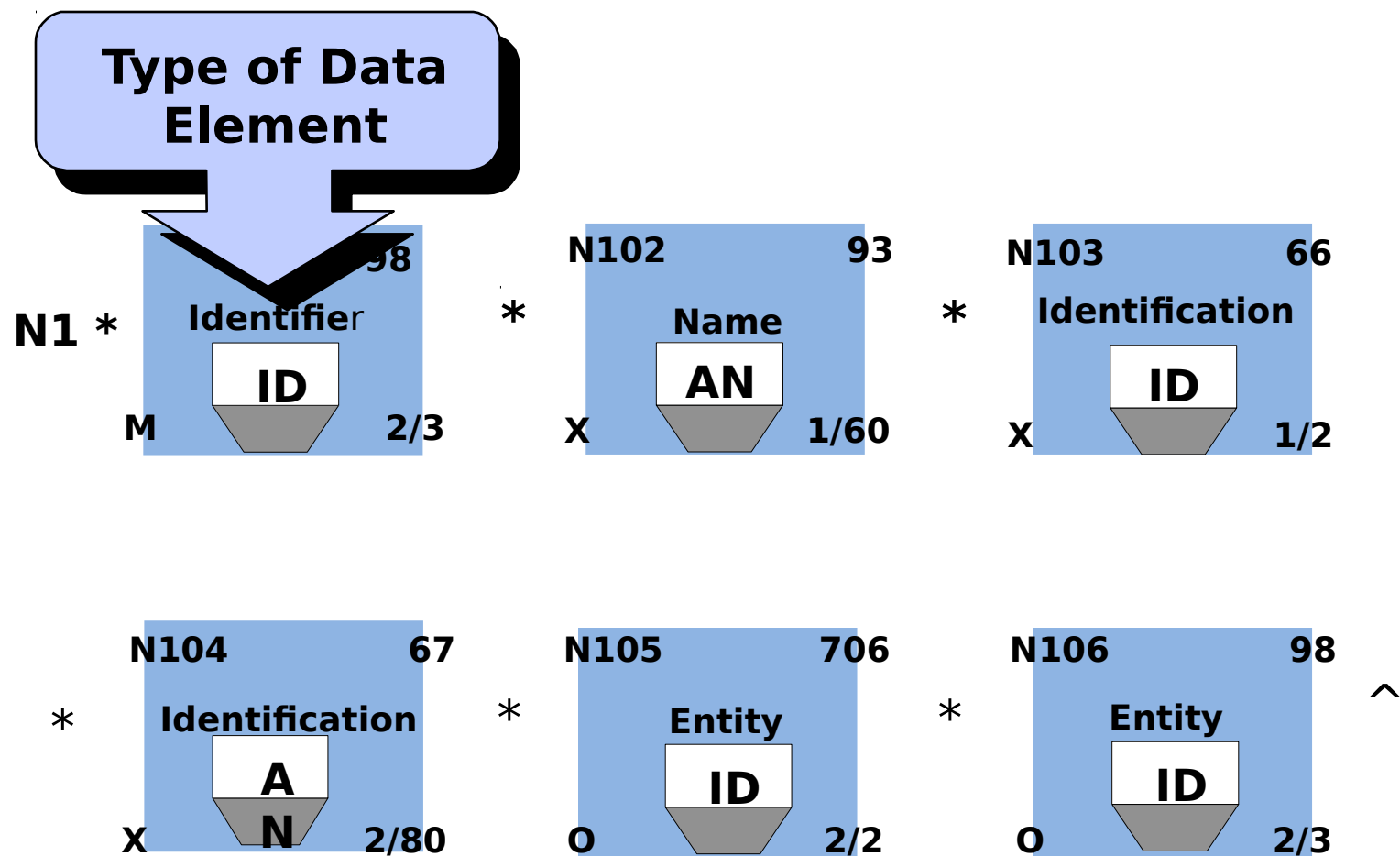


Data Segment Diagram



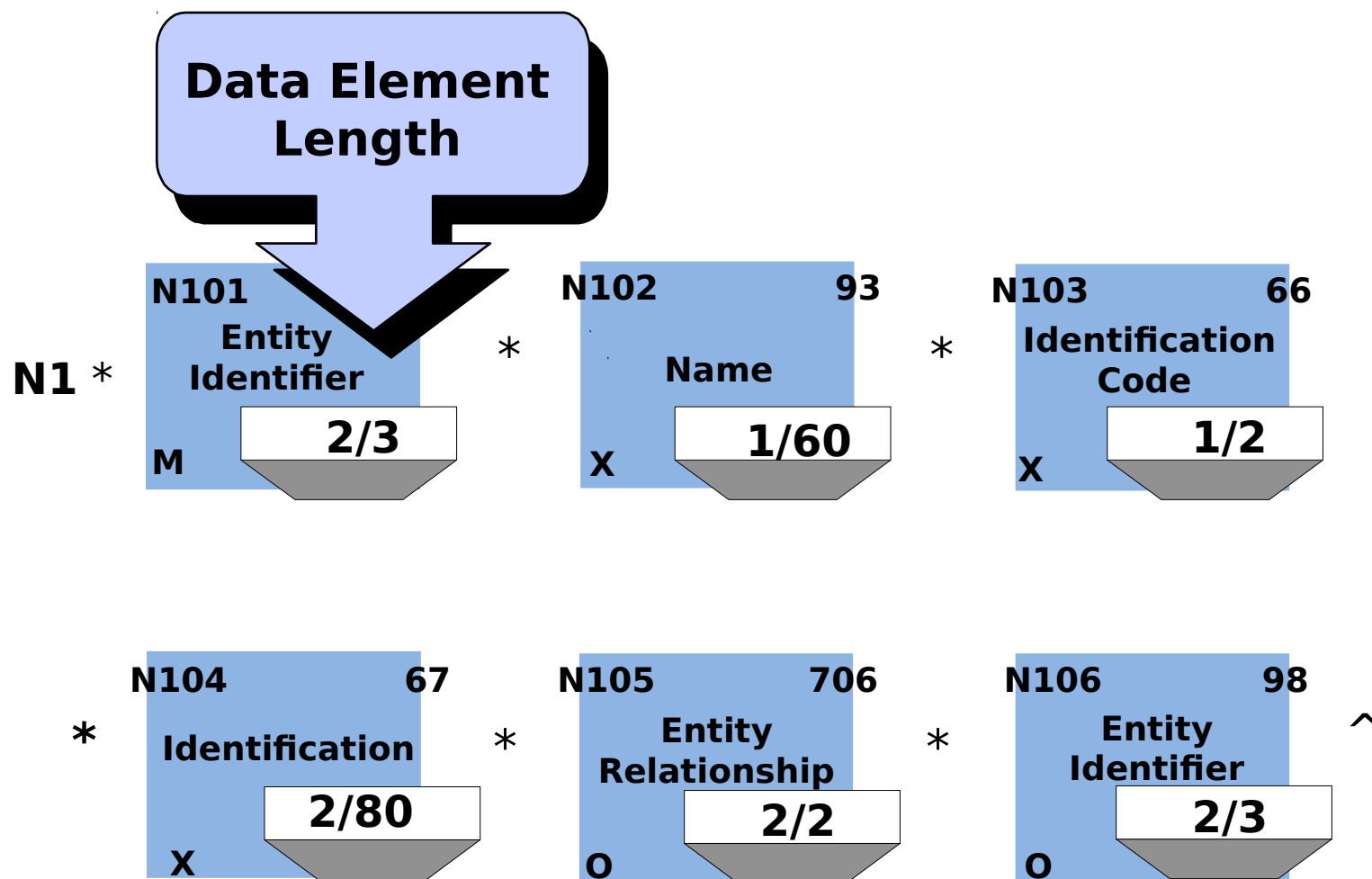


Data Segment Diagram



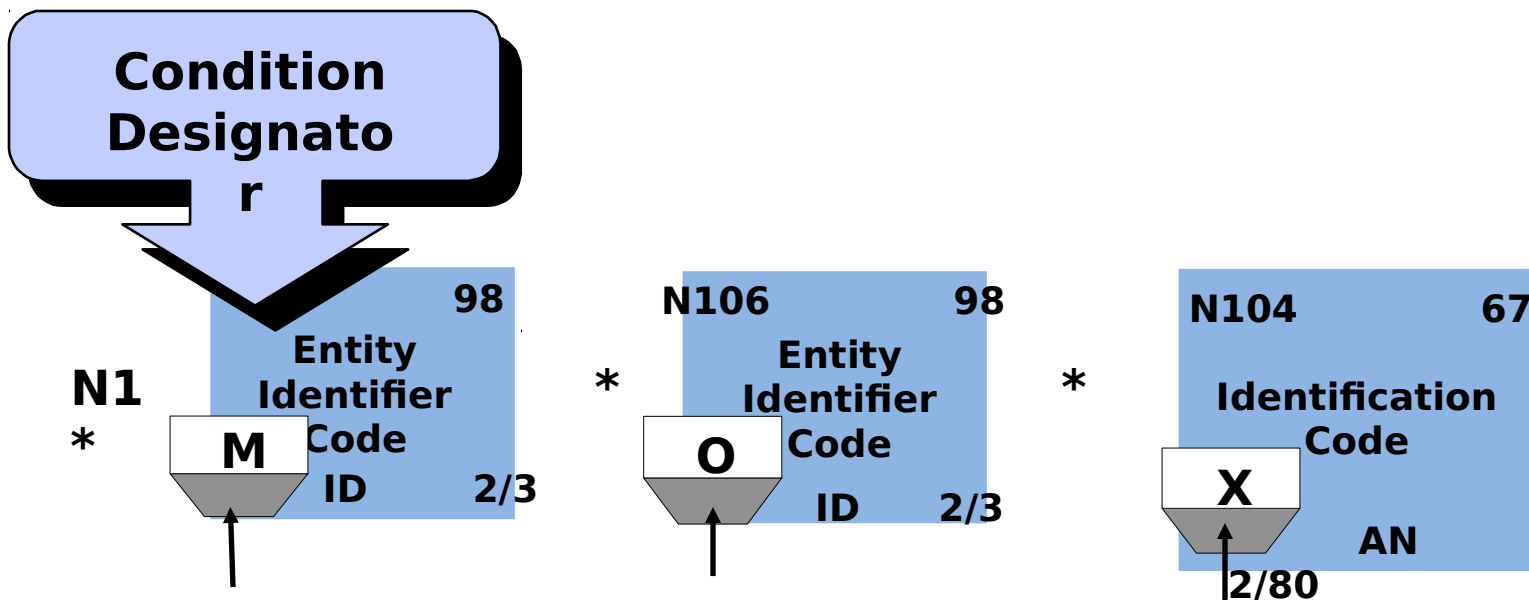


Data Segment Diagram





Data Segment Use



M = Mandatory

O = Optional

X = Syntax note applies

Z = Semantic note applies

Combinations may be applicable



Data Segment Diagram

-

Data Dictionary Format

N1 Name

To identify a party by type of organization, name and code

Transaction Sets used in:

104	110	120	128	130	131	135	140	180	511	517
527	536	561	567	568	810	812	824	830	842	

Ref.	Ele. No.	Name	Attributes		
01	98	Entity Identifier Code	M	ID	2/3
02	93	Name	X	AN	1/60
03	66	Identification Code Qualifier	X	ID	
1/2					
04	67	Identification Code	X	AN	2/80
05	706	Entity Reference Code	O	ID	2/2
06	98	Entity Identifier Code	O	ID	2/3



Data Segment Diagram

N1 Name

To identify a party by type of organization, name and code

Transaction Sets used in:

104	110	120	128	130	131	135	140	180	511	517
527	536	561	567	568	810	812	824	830	842	

Order of Element

Ref.	Ele. No.	Name	Attributes		
01	98	Entity Identifier Code	M	ID	2/3
02	93	Name	X	AN	1/60
03	66	Identification Code Qualifier	X	ID	1/2
04	67	Identification Code	X	AN	2/80
05	706	Entity Reference Code	O	ID	2/2
06	98	Entity Identifier Code	O	ID	2/3



Data Segment Diagram

N1 Name

To identify a party by type of organization, name and code

Transaction Sets used in:

104	110	120	128	130	131	135	140	180	511	517
527	536	561	567	568	810	812	824	830	842	

Data Element Number



Ref.	Ele. No.	Name	Attributes		
01	98	Entity Identifier Code	M	ID	2/3
02	93	Name	X	AN	1/60
03	66	Identification Code Qualifier	X	ID	1/2
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Data Segment Diagram

N1 Name

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104	110	120	128	130	131	135	140	180	511	517
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Data Segment Diagram

N1 Name

To identify a party by type of organization, name and code

Transaction Sets used in:

104	110	120	128	130	131	135	140	180	511	517
527	536	561	567	568	810	812	824	830	842	

**Element
Usage**

Ref.	Ele. No.	Name	Attributes		
01	98	Entity Identifier Code	M	ID	2/3
02	93	Name	X	AN	1/60
03	66	Identification Code Qualifier	X	ID	1/2
04	67	Identification Code	X	AN	2/80
05	706	Entity Reference Code	O	ID	2/2
06	98	Entity Identifier Code	O	ID	2/3



Data Segment Diagram

N1 Name

To identify a party by type of organization, name and code

Transaction Sets used in:

104	110	120	128	130	131	135	140	180	511	517
527	536	561	567	568	810	812	824	830	842	

**Format & Size
of Data
Element**

Ref.	Ele. No.	Name	Attributes		
01	98	Entity Identifier Code	M	ID	2/3
02	93	Name	X	AN	1/60
03	66	Identification Code Qualifier	X	ID	1/2
04	67	Identification Code	X	AN	2/80
05	706	Entity Reference Code	O	ID	2/2
06	98	Entity Identifier Code	O	ID	2/3



Data Segment Notes

Three types of segment level notes:

- Syntax: Define dependencies based on the presence or absence of other data elements in the segment
- Semantic: Provide additional information about the data element including any dependence based on the data value in another data element in the segment
- Comments: Clarify the intended use of the segment - comments are not part of the standard



Data Elements Within a Segment

**The same data element may be used
in many different segments**

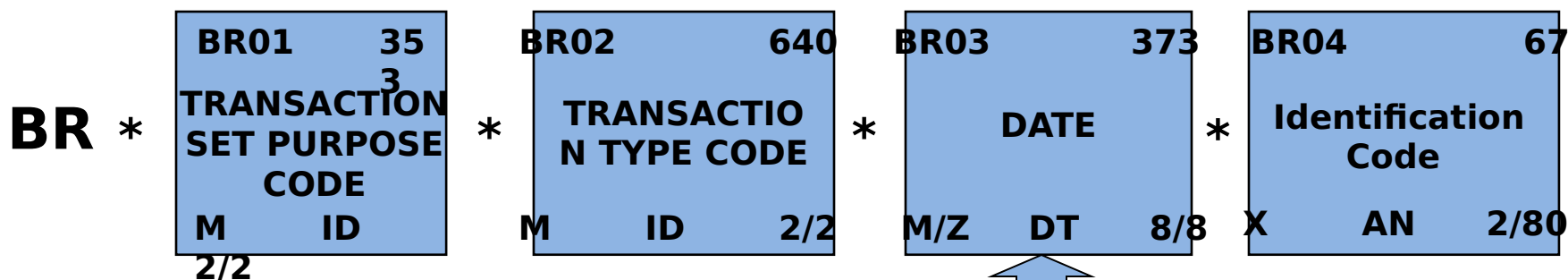
**Most data elements are generic with
their meaning determined by
either the context of the segment
they are used in or by the
presence of a qualifier data
element within the segment**



Generic Data Elements

Example 1 - Generic data element 373, Date, used with a semantic note.

BR03	373
DATE	
M/Z	DT 8/8



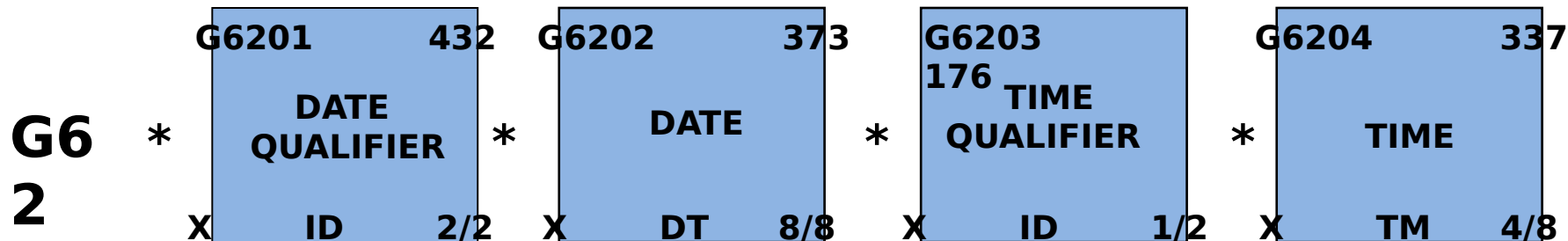
Semantic Note: BR03 is the date of the transaction set preparation



Generic Data Elements

Example 2 - Generic data element 373, Date, used with a qualifying data element.

G6202	373
DATE	
X	DT 8/8



Date Qualifier type = ID (codes list available)

(e.g. "68" = Requested Delivery Date, or

"BD" = Required By)



Relational Conditions

Defines a relationship between two or more data elements in a segment

Expressed in syntax note by letter code followed by the last two digits of the reference designator of the effected data elements (e.g. P0203)

- P (Paired): If any specified data element is present, then all the specified data elements must be present
- R (Required): At least one of the specified data elements must be present
- E (Exclusive): Not more than one of the specified data elements may be present
- C (Conditional): If the first specified data element is present, then all other specified data elements must be present
- L (List Conditional): If the first specified data element is present, then at least one of the remaining specified data elements must be present

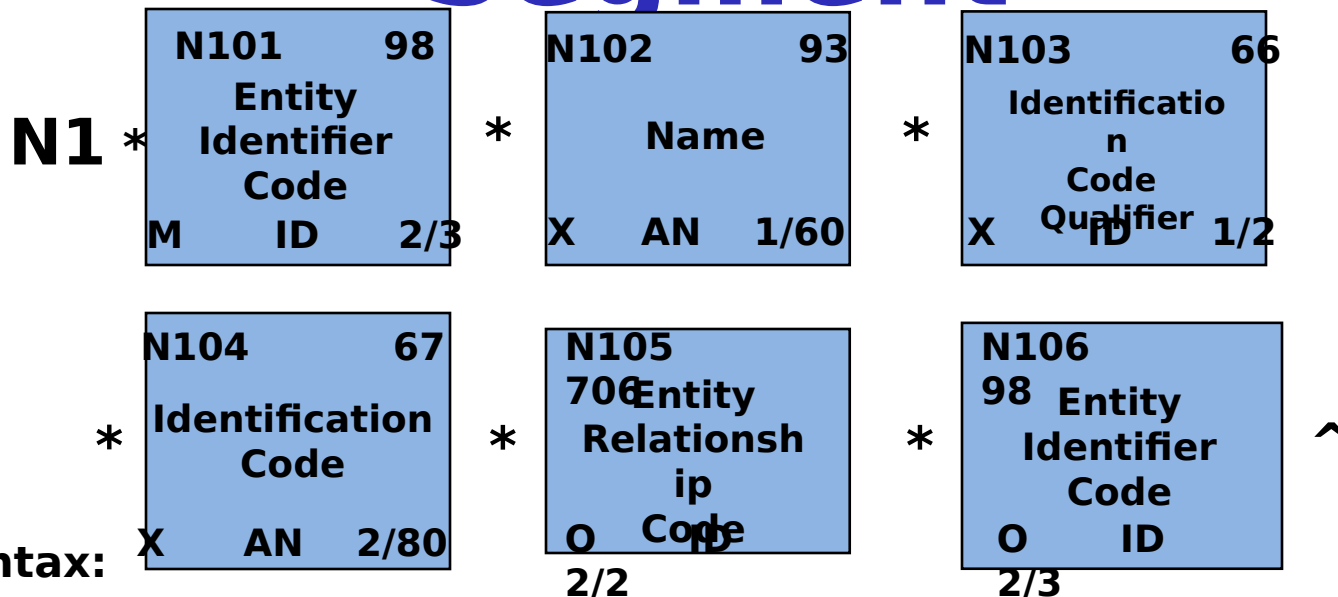


N1

N1 Name

Segment

To identify a party by type of organization, name and code.



1. N102 R0203 - At least one of N102 or N103 is required.
2. N103 P0304 - If either N103 or N104 are present, then the other is required.

Comments:

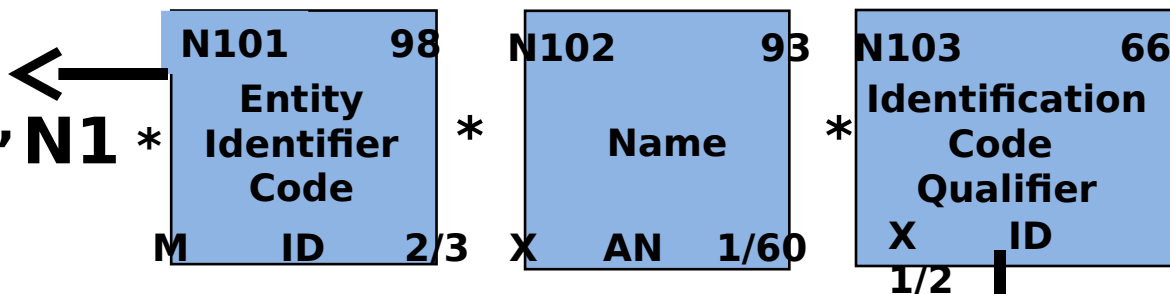
3. This segment, used alone, provides the most efficient method of organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.
4. N105 and N106 further define the type of entity in N101.



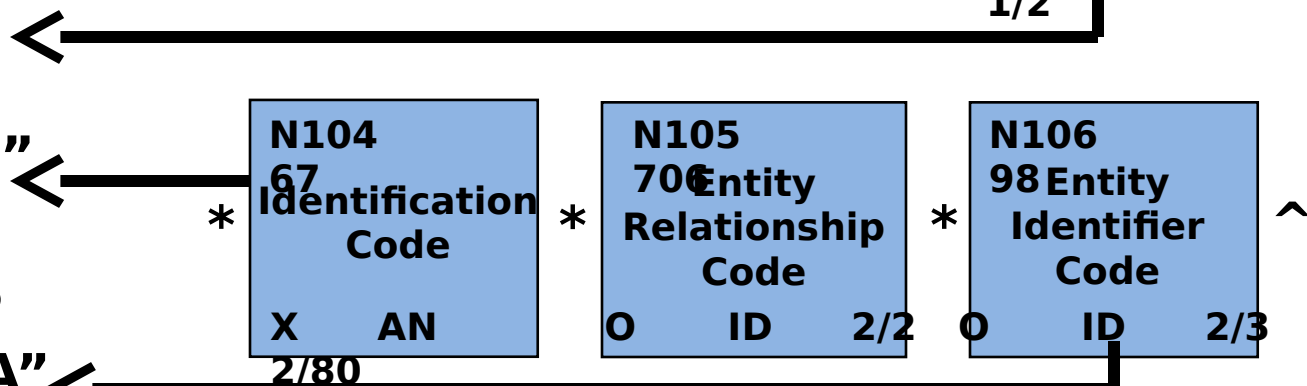
Data Segments

N1*Z4M4*N35**TO^**

Z4 = "Owning
Inventory
Control Point"



M4 = "Routing
Identifier
Code (RIC)"



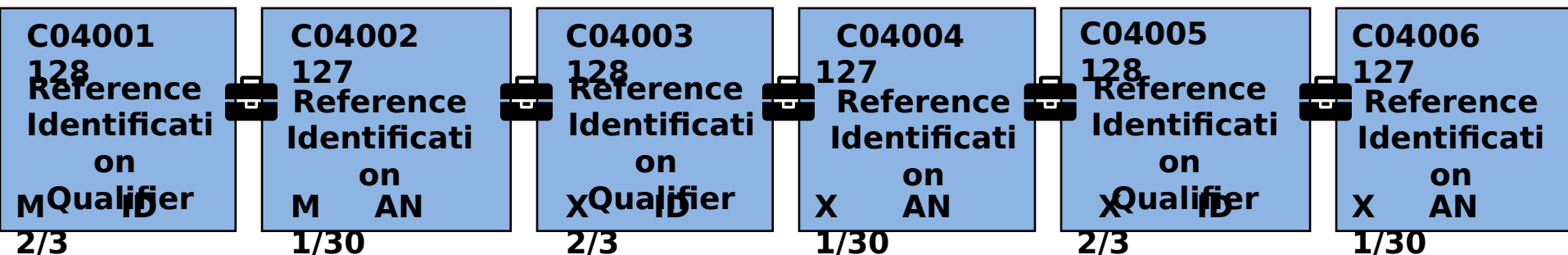
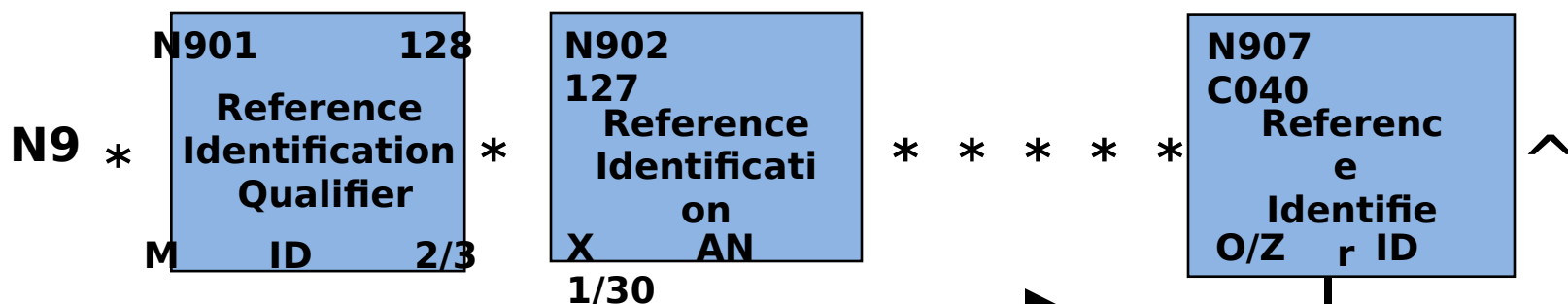
N35 = "Naval ICP
Mechanicsburg PA"

TO = "Message To"



Composite Data Structure Within a Segment

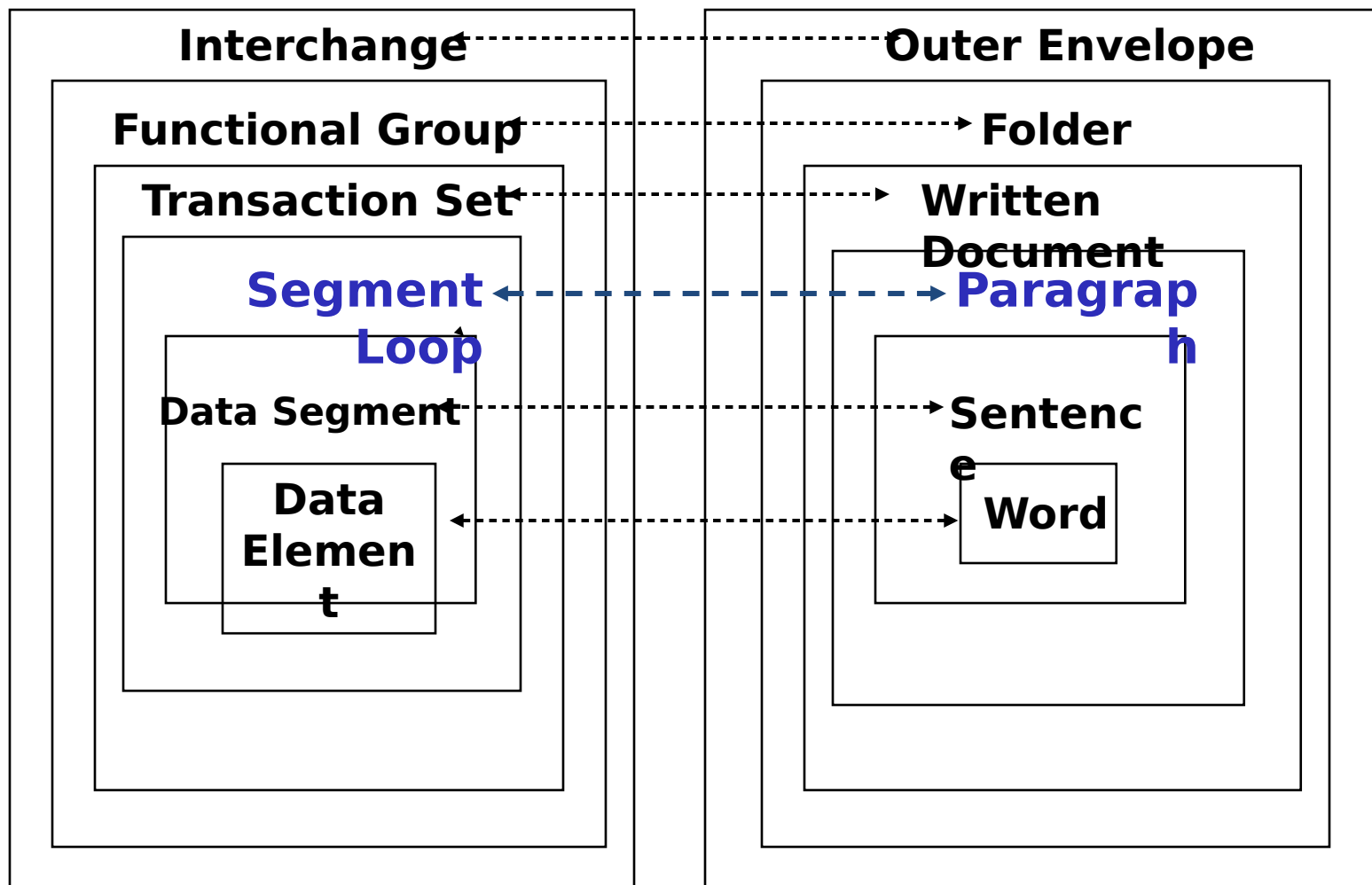
N9*TN*FB205000210001*****W8B^



Example - Composite data element C040, Reference Identifier, used in N9, Reference Identification



Standard File Structure





Repeating Data

Specific sets of data may be used in multiple occurrences to support a functional requirement or to enhance efficiency of communications

- Items requisitioned by a single activity
- Dates applicable to a particular process
- Addresses – shipper, receiver, bill-to, status recipients

ASC X12 transactions provide multiple methods to accomplish this:

- Repetition of a single segment
- Loop of a group of segments
- Hierarchical loops



Segment Repetition

A single segment may sometimes be repeated in multiple occurrences

**Each segment within a transaction set has a specified maximum number of occurrences (e.g. 1 or 100) or may be specified as having an unlimited number of occurrences (noted as ">1")
--also referred to as the "max use"**



Data Segment Loops

By definition, loops are groups of two or more related segments which may be repeated



The name of the loop is indicated by the loop ID which is named for the first segment in the loop

Loops have a specified maximum number of occurrences or may be specified as having an unlimited number of occurrences (noted as ">1") -- referred to as the loop repeat

There is a specified sequence of segments in the loop

The first segment in the loop has a max use of 1 -- all other segments in the loop may be repeated as specified



N1 Loop

	<u>Req</u>	<u>Max Use</u>	<u>Repeat</u>
<u>Loop ID - N1</u>			
		100	
N1 M	Name 1		
N2 2	Additional Name Information	0	
N3	Address Information 2		0
N4	Geographic Location 1		0



Nested Loops

Loops may have subordinate loops nested within them

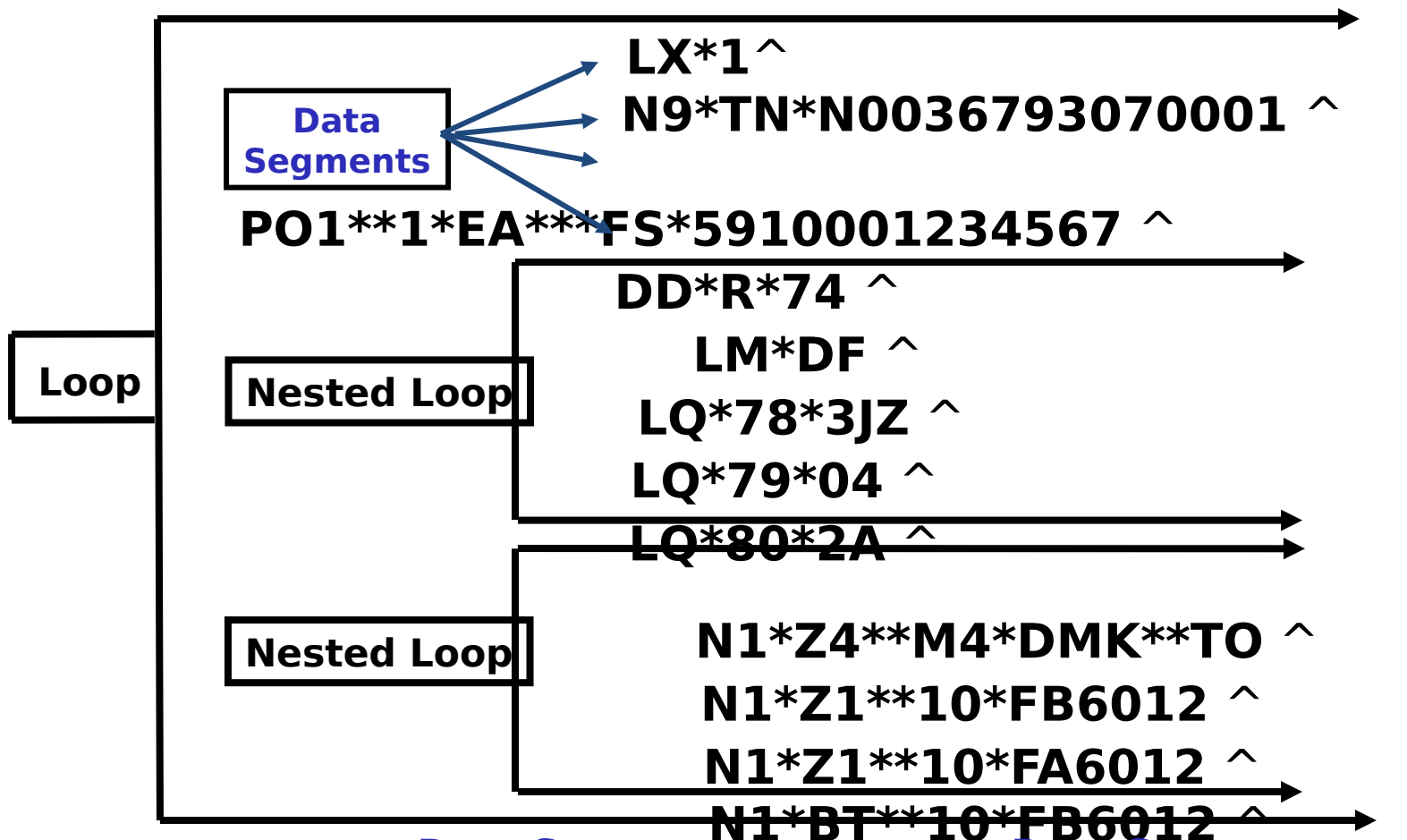
The name of the nested loop is indicated by the Loop ID which is named for the first segment in the subordinate loop

Nested loops cannot begin with the same first segment as the previous (or outer) loop

Nesting may occur up to an indefinite number of levels



Loops and Nested Loops



Data Segments

LX = Assigned Number

N9 = Reference

Identification

PO1 = Baseline Item Data

Data Segments

DD = Demand Detail

LM = Code Source

Information

LQ = Industry Code



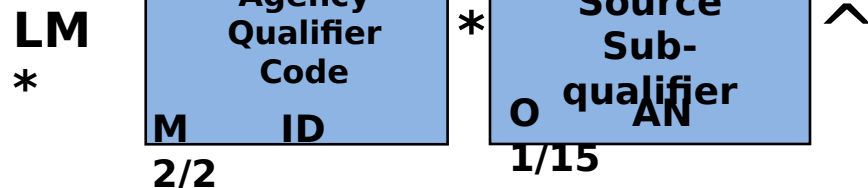
Non-ASC X12 Code Lists

DoD/Agency/Industry may reference specific code lists maintained outside ASC X12

Tool to accomplish this provided by the LM Loop

LM Code Source Information

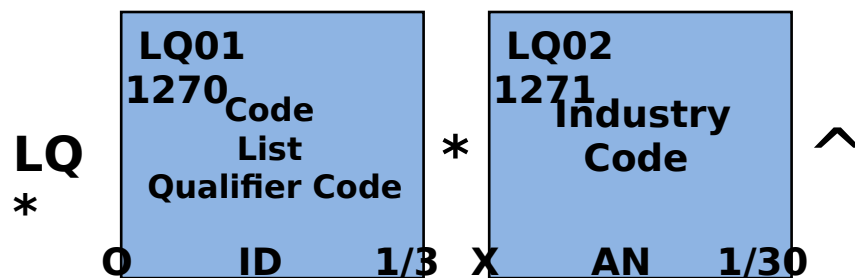
To transmit standard code list identification information



COMMENTS: LM02 identifies the applicable industry code list source information

LQ Industry Code

To transmit standard industry codes



SYNTAX NOTES: C0102 - If LQ01 is present, then LQ02 is required



LM Loop

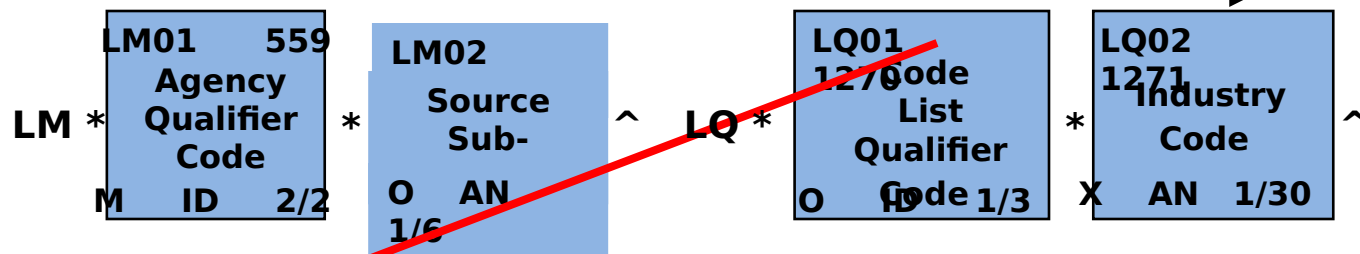
Repeat Use Repeat

Loop ID - LM

50

LM Code Source Information 0 1

LQ Industry Code M 100



LM*DF

LQ*78*3JZ

LQ*79*04

1270	Code List Qualifier Code
<u>CODE</u>	<u>DEFINITION AND EXPLANATION</u>
78	Project Code SEE CODE SOURCE 350
79	Priority Code SEE CODE SOURCE 350

350 Defense Logistics Management Standards Manual

SOURCE: DLM 4000.25

AVAILABLE FROM: DLMSO

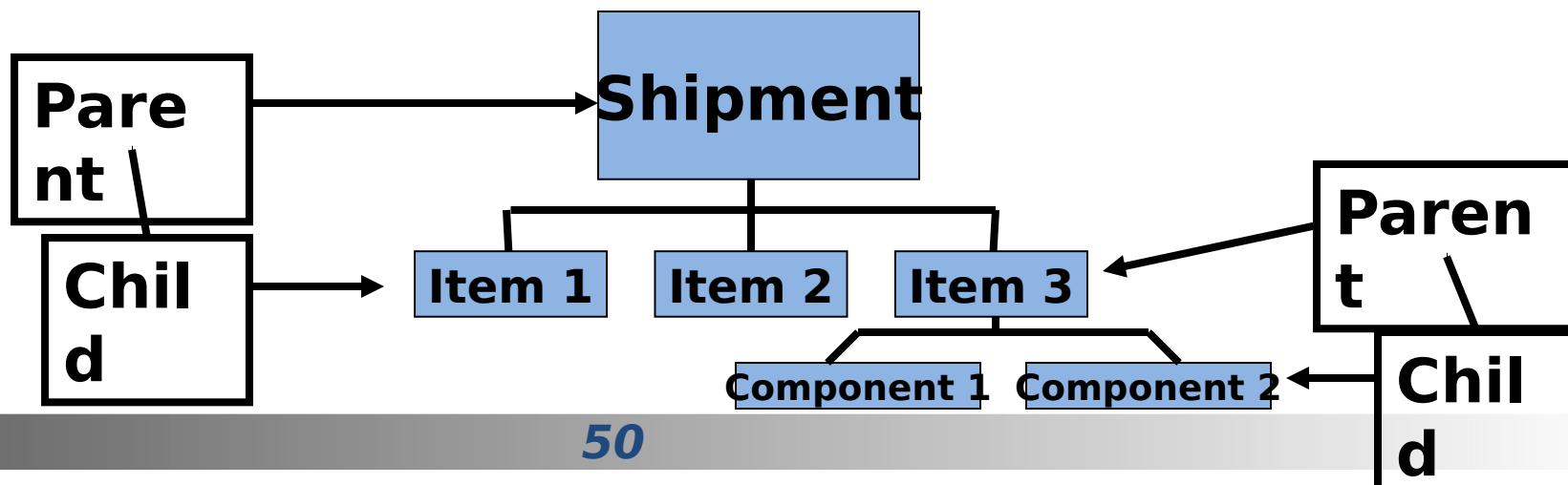
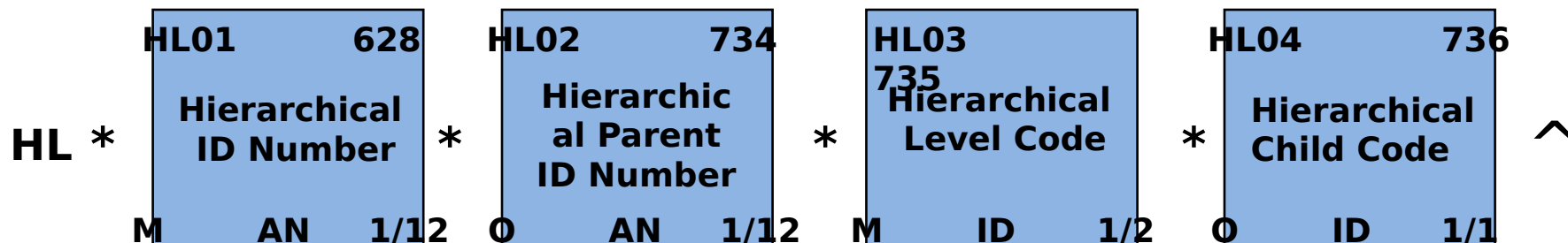
ABSTRACT: This publication provides a comprehensive set of concepts, general guidance and codes related to EDI processing in the DoD logistics system in ASC X12 syntax.



Hierarchical Level Loops

HL Hierarchical Level

To identify dependencies among, and the content of, hierarchically related groups of data segments.





Hierarchical Level Loops

Segment Sequence Within the Transaction

HL
LIN
SN1
TD5
REF
DTM
N1
N2
N3
N4

HL loop 1 = address information (HL Code V)

HL *1**V^

N1 (Originating activity address)

HL *2**W

LIN (Material identification) ^

SN1 (Quantity shipped) ^

TD5 (Mode of shipment) ^

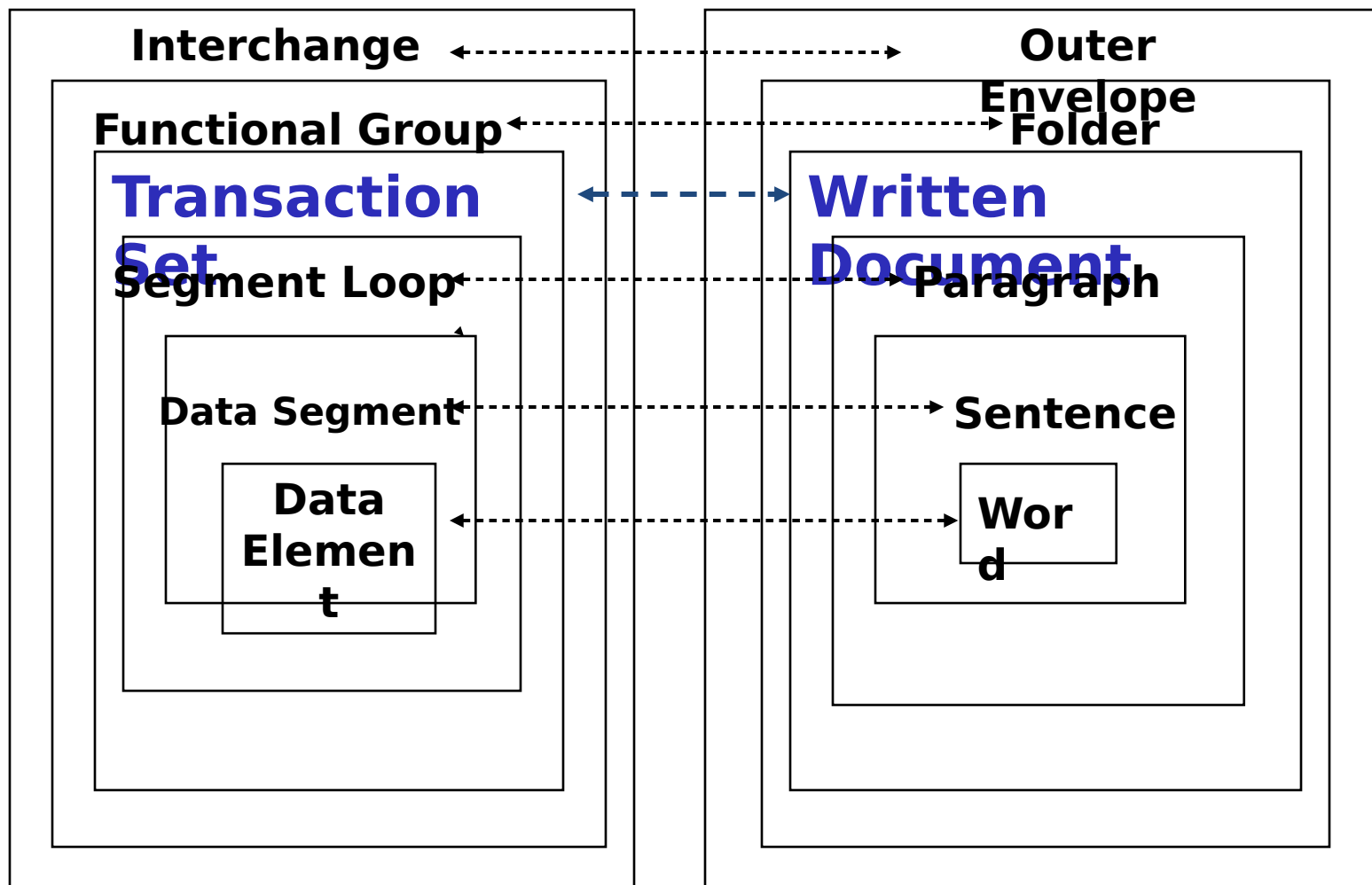
REF (Reference numbers) ^

HL loop 2 = shipment notice information (HL Code W)

N1 (Receiving activity)



Standard File Structure





Transaction Set

A group of data segments in a predefined sequence needed to provide all the data required to define a complete transaction

Uniquely identified by a three-digit number and a name

Begins with an ST segment and ends with an SE segment

Must contain a beginning segment



Transaction Set - Header and Trailer -

ST Segment, Transaction Set Header

- ✓ Transaction Set ID (e.g., 511, 527, 810)
- ✓ Control number (assigned by sender's computer)
- ✓ Example: ST*511*000000001

SE Segment, Transaction Set Trailer

- ✓ Segment counts
- ✓ Same control number used in ST segment
- ✓ Example: SE*14*000000001



The Beginning Segment

A segment at the beginning of each transaction set which defines the purpose, type and action, date, and unique identification

Indicates additional processing that may be required



BR Segment

BR Beginning Segment for Material Management

To indicate the beginning of a transaction and transmit identifying numbers and dates

TRANSACTION SETS USED IN:

511 517 527 536

<u>REFE</u>	<u>LE ID</u>	<u>NAME</u>	<u>ATTRIBUTES</u>						
01	353	Transaction Set Purpose Code	M	ID	2/2				
02	640	Transaction Type Code	M	ID	2/2				
03	373	Date	M/Z	DT	8/8				
04	67	Identification Code				X	AN	2/80	
05	66	Identification Code Qualifier				O	ID	1/2	
06	306	Action Code				O	ID	1/2	
07	128	Reference Identification Qualifier				X	ID	2/3	
08	127	Reference Identification					X	AN	1/30
09	337	Time	O/Z	TM	4/8				
10	128	Reference Identification Qualifier				X	ID	2/3	
11	127	Reference Identification					X	AN	1/30

SYNTAX NOTES

- 05 C0504** - If BR05 is present, then BR04 is required.
- 07 P0708** - If either BR07 or BR08 is present, then the other is required.
- 10 P1011** - If either BR10 or BR11 is present, then the other is required.

SEMANTIC NOTES

- 03** BR03 is the date of the transaction set preparation.
- 09** BR09 is the time of the transaction set preparation.



Transaction Set Table Diagram

Identifies the purpose of the transaction set

Identifies all the segments which comprise the transaction set in sequence by position number

Identifies the structure of the transaction set as heading (table 1) or detail (table 2) or summary (table 3)

Identifies the loop and nested loop structure

Indicates which segments are Mandatory or Optional

Indicates the maximum use of repeating segments



Transaction Set Tables

<u>Pos</u>	<u>Id</u>	
10	ST	Table 1
20	BR	
10	LX	Table 2
20	LM	
30	FA2	
40	SE	

<u>Pos</u>	<u>Id</u>	
10	ST	Table 1
20	BR	
10	IT1	Table 2
20	PID	
30	FA2	
10	TDS	Table 3
20	SE	

Transaction Table Diagram

511 Requisition

Functional Group: RN

This Draft Standard for Trial Use contains the format and establishes the data contents of the Requisition Transaction Set (511) for use within the context of an Electronic Data interchange (EDI) environment.

Heading:

<u>Pos No</u>	<u>Seg ID</u>	<u>Name</u>	<u>Req Des</u>	<u>Max Use</u>	<u>Loop Repeat</u>
	010 ST	Transaction Set Header	M	1	
	020 BR	Beginning Segment	M	1	
.		

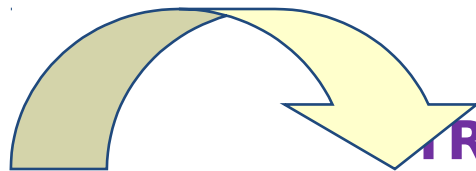
Detail:

<u>Loop ID-LX</u>					
10	LX	Assigned Number	O		>1
20	N9	Reference Identification		M	>1
.		
.		

<u>Loop ID-LM</u>					
270	LM	Code Source Information	0	50	1
280	LQ	Industry Code	M	100	



DLMS 810L, Logistics Bill



TRANSACTION SET SECTIONS

DLMS Implementation Convention (IC) 810L Logistics Bill ADC 77, 154, 221A, 274, 290, 315, 332, 350, 435, 436, 448, 448B and 1043 DLM 4000.25

810 Invoice

Functional Group=IN

Purpose: This Draft Standard for Trial Use contains the format and establishes the data contents of the Invoice Transaction Set (810) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to provide for customary and established business and industry practice relative to the billing for goods and services provided.

Federal Note:

DoD logistics users should refer to the Defense Logistics Management Standards (DLMS) Implementation Convention (IC) available at URL: <http://www.dla.mil/lj-6/dlms>. The DLMS IC provides specific business rules, conditions, and authorized codes necessary for appropriate use of this IC within the DLMS.

DLMS Note:

1. Use a single occurrence of this transaction set to bill or provide adjustments for one or more items provided to a single paying (bill-to) office under DLMS procedures.
2. Users operating under the Defense Logistics Management Standards (DLMS) must reference the Unit of Issue and Purchase Unit Conversion Table, Transportation Mode of Shipment Conversion Table and the Accounting Classification Appendix which can be found on the DLA Logistics Management Standards Office Web site at <http://www.dla.mil/lj-6/dlms>.
3. Finance and accounting offices, invoicing (billing) offices and other offices use this transaction set to forward DoD Defense Logistics Management Standards (DLMS) invoices for materiel and related services exchanged between DoD components and other participating Federal Agencies.
4. The transaction set may include multiple allowances and charges related to those lines of billing or to the invoice as a whole. Use one occurrence of this transaction set to transmit single or multiple transactions.
5. The total number of IT1 and SAC segments may not exceed 495.
6. This DLMS Implementation Convention contains:
 - a. Data associated with a DLMS enhancement which may not be received or understood by the recipient's automated processing system. DLMS procedures may not have been developed. Components must coordinate requirements and business rules with DLA Logistics Management Standards Office prior to use.
 - b. Data associated with an Approved Change which may not have an established implementation date. This data may not be received or understood by the recipient's automated processing system. Components must coordinate implementation with DLA Logistics Management Standards Office prior to use.
 - c. Defense Logistics Standard System (DLSS) data which must be retained in the DLMS for a transition period to support transaction conversion in a mixed DLSS/DLMS environment. This data will be streamlined out once full DLMS implementation is reached. Components may coordinate with DLA Logistics Management Standards Office for early termination (or retention) of specific data requirements for users operating in a full DLMS environment.

PURPOSE: Used to invoice material and equipment from a supply distribution system for immediate consumption or stockage against projected requirements.

TABLE 1, Header Section. Contains information common to all bills such as; transaction type, transaction set control number, code identifying type of bill, date and time, etc.

TABLE 2, Detail Section. Contains detailed data specific to the specific billing transaction. Examples of data in the detail section are; identity of invoicing (billing) office, purchase unit, quantity, currency, who will pay, date, product description, billing address, etc.

TABLE 3, Summary Section. Contains summaries of the details contained in table 2. Most frequently used in financial transactions.



ADC 381 changes to DLMS 511R

Item #	Location	DS 511R Requisition Revision	Reason
13.	2/N101/180	<p>Add the following qualifier and DLMS note:</p> <p>DZ Delivery Zone DLMS Note: 1. Use to provide the DELIVERY LOCATION indicating where the material is to be staged/stored. 2. Authorized DLMS enhancement under DLA industrial activity support agreement. Refer to ADC 381.</p>	
14.	2/N101/180	<p>Update DLMS notes for existing qualifiers XN:</p> <p>XN Planning/Maintenance Organization DLMS Note: 1. Use between Service industrial/maintenance sites and DLA to identify the Shop Service Center (SSC) associated with a requisition. Also used to identify a Shop Store. 2. This may be used in the basic requisition, requisition alert or in the Post-Post (DI Code C04) DLMS 511R submitted to DLA 3. Authorized DLMS enhancement under DLA industrial activity support agreement. Refer to ADC 284A & 381.</p>	Expands existing usage for Navy BRAC Spiral II requirements.

Table
ID
Pos

ADC 381 Change to DLMS 511R Implement Navy BRAC Spiral II



EDI Document Structure

The MILS Fixed Format

DLMS EDI Format

<u>RP</u> s	<u>Field Legend</u>
01-03	Document Identifier
04-06	Routing Identifier
07	Media and Status
08-22	Stock Number
23-24	Unit of Issue
25-29	Quantity
30-43	Document No
44	Demand
45-50	Supplementary
Address	
51	Signal
52-53	Fund
54-56	Distribution
57-59	Project
60-61	Priority
62-64	Required Delivery Date
65-66	Advice
67-69	Blank (Date of Rcpt on Referral/Passing)
Order)	
70-80	Blank (Intra-Service use)



FB2300930700
01

```
ST*511*00000001^
BR*00*A0*20000729*****131
708^
N1*OB**10*FB2300**FR^
LX*1^
N9*1N*FB230093070001^
PO1**1*EA***FS*5910001234
567^
DD*R*74^
LM*DF^
LQ*0*A01^
LQ*78*9GF^
LQ*79*08^
LQ*80*2A^
LQ*DE*A^
LQ*DF*B^
LQ*AL*777^
N1*Z4**M4*SMS**TO^
FA1*DY*D340^
FA2*B5*KZ^
SE*14*00000001^
```



Transaction Set Composition

- 511 Requisition

Transaction Set

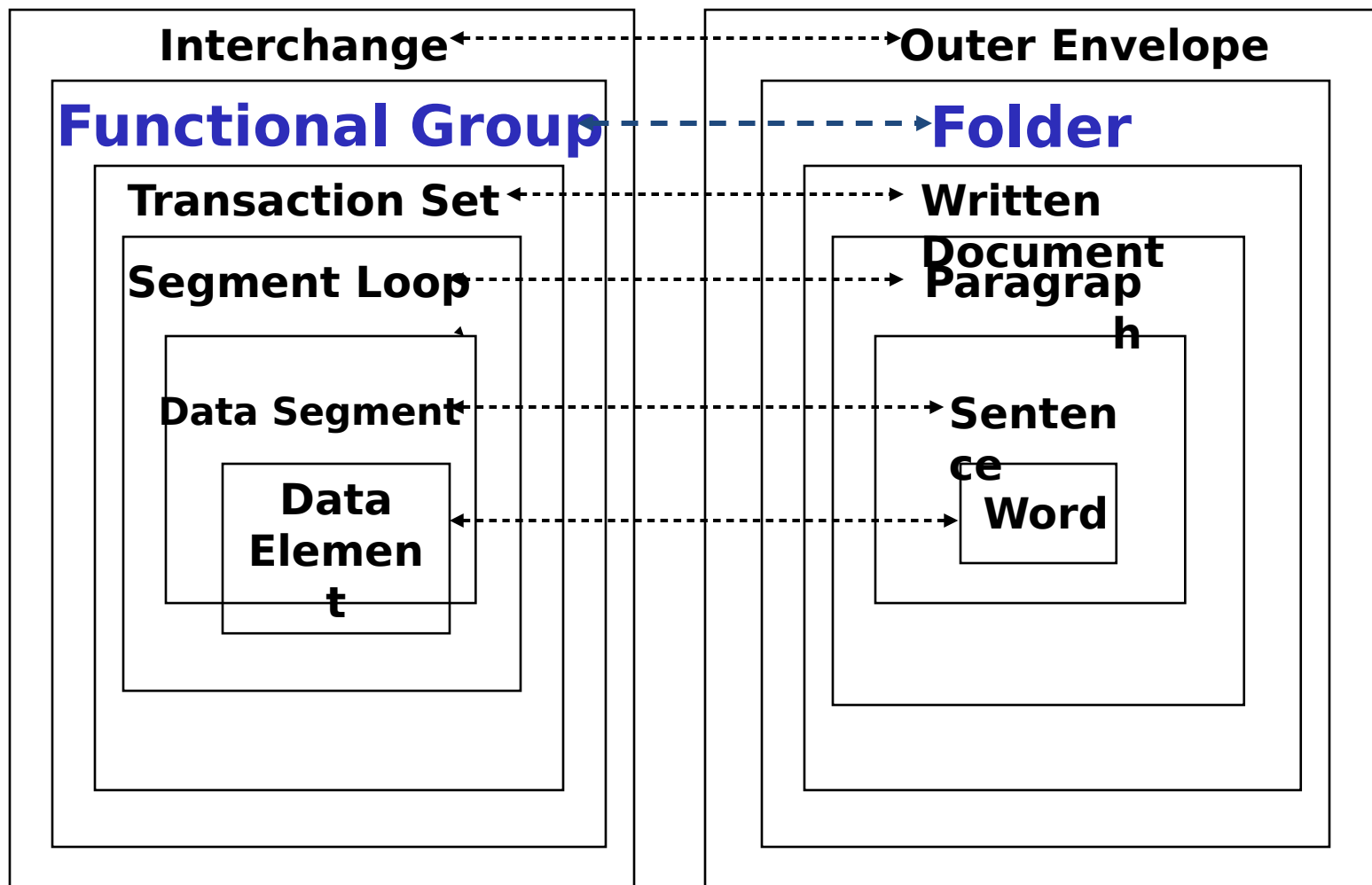
Data Segment

ST*511*00000001^
BR*00*A0*20000110*****131708^
N1*OB**10*FB6012**FR^
LX*1^
N9*TN*N0036793070001^
PO1**1*EA***FS*5910001234567^
DD*R*74^
LM*DF^
LQ*80*2A^
LQ*0*A0A^
LQ*AL*777^
LQ*DF*S^
LQ*DE*A^
LQ*78*XZZ^
LQ*79*02^
LQ*A9*YBLDG1^
LQ*AK*F^
N1*Z4**M4*DMK**TO^
N1*Z1**10*FB6012^
N1*Z1**10*FB6012^
N1*BT**10*FB6012^
FA1*DY*D340^
FA2*B5*KZ^
SE*24*00000001^

Data Element



Standard File Structure





Envelopes

Envelopes are specialized segments that enclose groups of documents or transaction sets

Envelopes provide:

- **Verification of proper transmission**
- **Time and date stamping of transmission**
- **Routing information**
- **Version control information**

There are two levels of envelopes....



Functional Group Envelope

The inner envelope is used to group like documents or transaction sets within a transmission

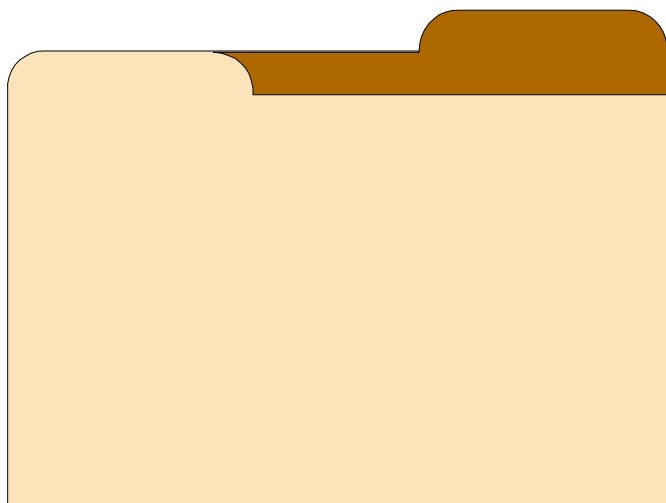
This envelope is defined by the Functional Group Header (GS) and Functional Group Trailer (GE) segments

- Contains a functional group ID (e.g., RN (511), MD (527))
- Contains transaction set counts and functional group control numbers
- Contains a time/date stamp of when the group was generated
- Provides format, version, and release specifications of the transactions within the group



Functional Group Envelope

**Folder = Functional
Group**

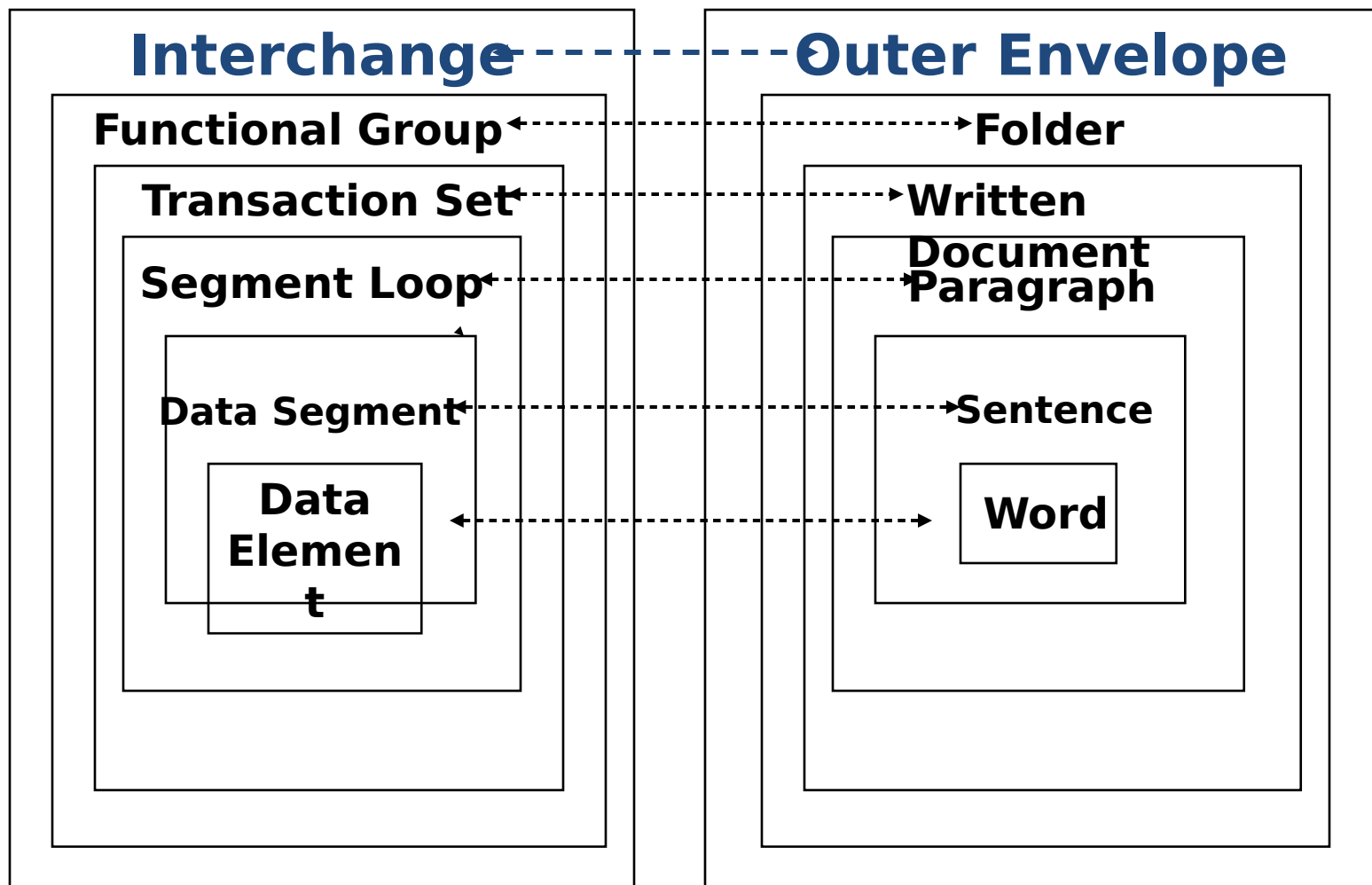


=

```
GS*RN*APPSENDERCODE*AP
PRCVRCODE*20010110*1653
*000000044*X*004010D511R
0
    ST*511*1001
    .
    .
    .
    SE*17*1001
GE*3*000000044
```



Standard File Structure





Interchange Envelope

The outer envelope is used to group one or more folders or functional groups within a transmission

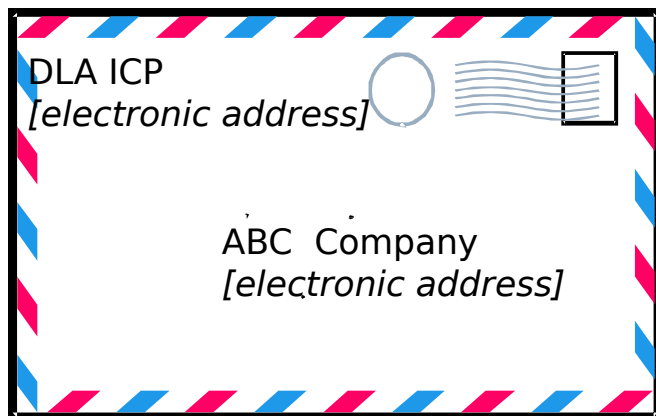
This envelope is defined by the Interchange Control Header (ISA) and Interchange Control Trailer (IEA) segments

- Contains the structured mailbox address of the sender and the receiver
- Contains control numbers and counts of the different types of folders or functional groups inside
- Contains a time/date stamp
- Specifies the format and version of the interchange envelopes
- Specifies what characters are being used for data element delimiters (separators) and segment terminators



Interchange Envelope

**Envelope =
Interchange**

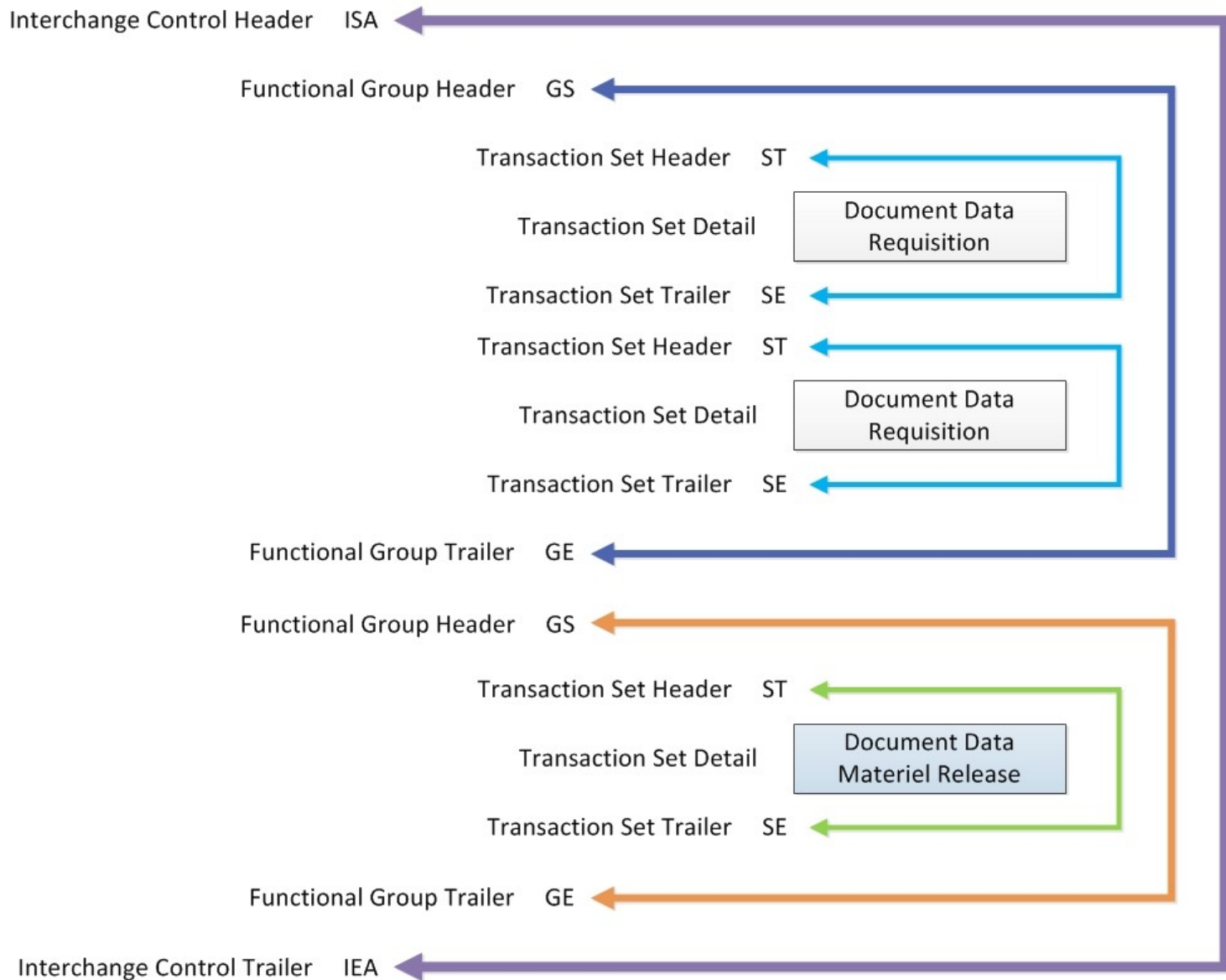


=

```
ISA*00*0000000000*01*HAPPYDAYS2*01
*SENDERDUNSNUMBR*01*RECVRDUNSNU
MBER*010110*1653*U*00400*00000030
*0*P*\
    GS...
    ST...
    .
    .
    SE...
    GE...
IEA*1*123456789^
```



EDI Data Levels





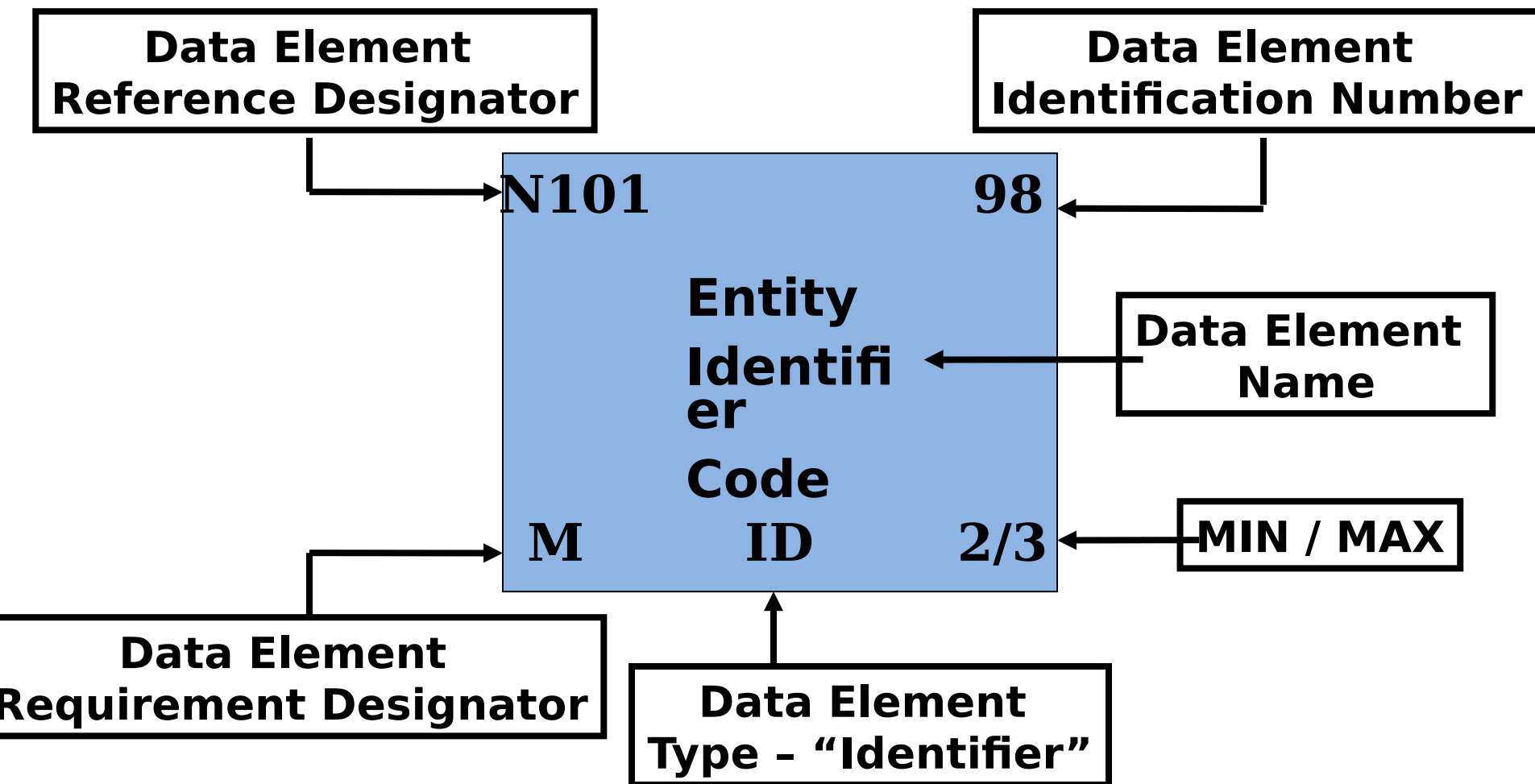
Module 2 Summary

What's been covered:

- **The components and structure of EDI**
 - ✓ Data Elements
 - ✓ Data Segments
 - ✓ Segment Loops
 - ✓ Transaction Sets
 - ✓ Functional Groups
 - ✓ Interchange Groups



Data Element within a Data Segment



Transaction Table Diagram

511 Requisition

Functional Group: RN

This Draft Standard for Trial Use contains the format and establishes the data contents of the Requisition Transaction Set (511) for use within the context of an Electronic Data Interchange (EDI) environment.

Heading:

<u>Pos No</u>	<u>Seg ID</u>	<u>Name</u>	<u>Req Des</u>	<u>Max Use</u>	<u>Loop Repeat</u>
	010 ST	Transaction Set Header	M	1	
	020 BR	Beginning Segment	M	1	

Detail:

<u>Loop ID-LX</u>				>1
10	LX	Assigned Number	O	
20	N9	Reference Identification	M	>1
.	
.	

<u>Loop ID-LM</u>				50
270	LM	Code Source Information	0	1
280	LQ	Industry Code	M	100



Module 2

Quiz

Question 1: Which of the EDI Components is equivalent to a written document?

- a) Interchange groups
- b) A novel
- c) Transaction set

Question 2: The three types of segment level notes are:

- a) Fictional
- b) Syntax
- c) Comments
- d) Semantic

Question 3: Using pages from the X12 511R handout, describe the meaning of the following X12 string of characters:

- a) N1*Z4**M4*DMK**TO^
- b) 2/N101/180
- c) PO1**1*EA***FS*5910001234567^
- d) N9*TN*FB230093070001^



End of Module 2